

# Craft Skills

## Valve Fundamentals



## Course Number

MMS-105

## Course Purpose

This course provides information on the types of valves and actuator used as control elements, valve components, and valve applications. There are hands-on exercises for equipment setup and evaluation.

Upon completion of this course, you should be able to:

- Identify the types of valve operators
  - Describe various types of valve actuators
  - Discuss possible problems with valve actuators and positioners
  - Describe the troubleshooting steps to repair faulty valve actuators
  - State the purpose of bench set information of a pneumatic actuator
- List and explain valve markings
  - Explain the function of a valve positioner
  - State when a valve positioner should and should not be used
  - Explain how to set up a valve positioner
  - Explain the importance of valve position indication and feedback
  - Discuss how valve position information impacts control of a process or system

## COURSE AGENDA

### DAY 1

- Introduction Exam
- Valve Construction and Operation
- Valve Types
- Valve Actuators
- Lab Exercises

### DAY TWO

- Valve Markings
- Lab Exercises
- Final Lab Exercise
- Review
- Written Exam

## WHO SHOULD ATTEND

This course is designed for mechanical technicians.

## PREREQUISITES

To successfully complete this course, the following prerequisites are required:

- Understanding of mechanical systems and applications

## STUDENT MATERIALS

To enhance and facilitate the students' learning experiences, the following materials are provided as part of the course package:

- Student Manual
  - Includes the key concepts, definitions, examples, and activities presented in this course
- Lab Guide which includes the hands-on exercises

## HANDS-ON PRACTICE

Throughout this course, you will have the opportunity to practice the skills you have learned through a variety of hands-on exercises. These exercises focus on the skills introduced in each lesson.

You will also have the opportunity to combine and practice groups of key skills by completing multiple integrated practices during the course.

## NEXT LEARNING LEVEL

Once you have mastered the skills covered in this course, you may want to attend specific training, such as:

- Valve Repair

## COURSE LENGTH





This is a two-day course.

### TO REGISTER

To register for this or any other Rockwell Automation training course, contact your local authorized Allen-Bradley® Distributor or your local Sales/Support office for a complete listing of courses, descriptions, prices, and schedules.

You can also access course information via the Web at <http://www.rockwellautomation.com/training>

To be respectful of the environment, Rockwell Automation is transitioning some of its training courses to a paperless format. Students are asked to complete downloads and bring personal devices to these classes. A full list of digital/paperless courses is currently available through your local distributor.

Connect with us.    

**rockwellautomation.com** — expanding **human possibility**™

AMERICAS: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

EUROPE/MIDDLE EAST/AFRICA: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

ASIA PACIFIC: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

Allen-Bradley is a trademark of Rockwell Automation, Inc.

Trademarks not belonging to Rockwell Automation are property of their respective companies.

Publication GMST-PP757B-EN-P – January 2020 | Supersedes Publication GMST-PP757A-EN-P – November 2017

Copyright © 2020 Rockwell Automation, Inc. All Rights Reserved. Printed in USA.